



Planning for FirstNet in Maryland

Maryland Broadband Team
Regional Coordinators





VISION

Provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety

HISTORY & THE ACT

Title VI of the *Middle Class Tax Relief and Job Creation Act of 2012*

Spectrum

- Allocated the “D-Block” to public safety
- Added 20MHz (10x10 MHz) to existing Public Safety Frequencies

Governance

- FirstNet Board

Funding

- \$7B for deployment and operations
- \$135M for state implementation planning



Not So Long Ago...



Transmitting
Vital Data Used
to Be
Complicated...

St. Peter's Square: The Vatican



Only 9 Years Ago It Was Still Uncommon...

Look a Flip Phone!

St. Peter's Square: The Vatican



Pope Francis Debut

Now, Data and Devices are EVERYWHERE!



Except here...

WHY??

**Commercial
networks** crash
when too many
users access
the network



***Workers Evacuated in Washington, DC During Earthquake, Aug. 23, 2011**

WHY??

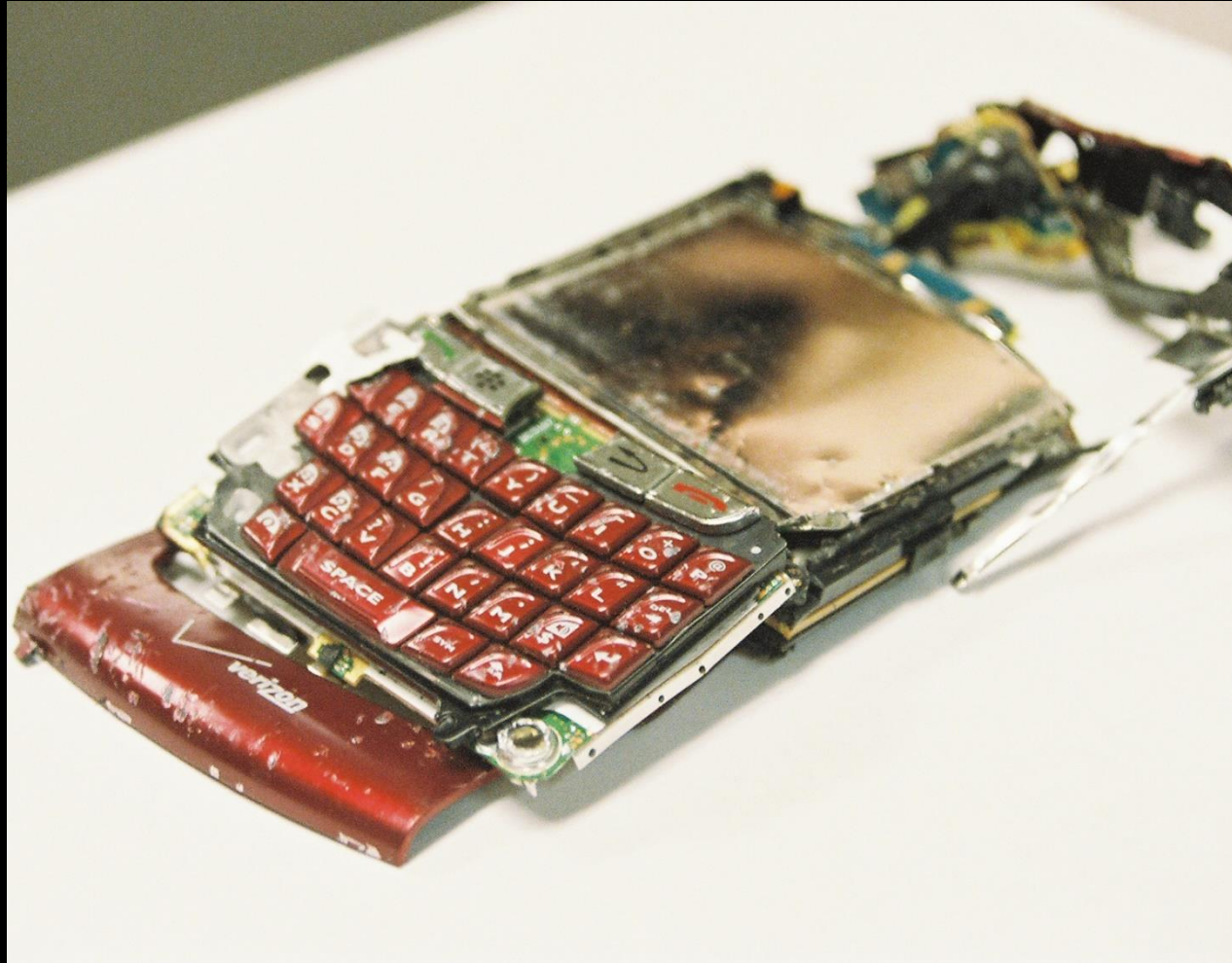


Commercial networks
fail in severe weather
like Katrina and Sandy

***Self-Supporting Tower Blown Down in High Wind**

WHY??

Devices Don't
Stand-Up to First
Responder Use



Now...

Delta 984 sir, go.

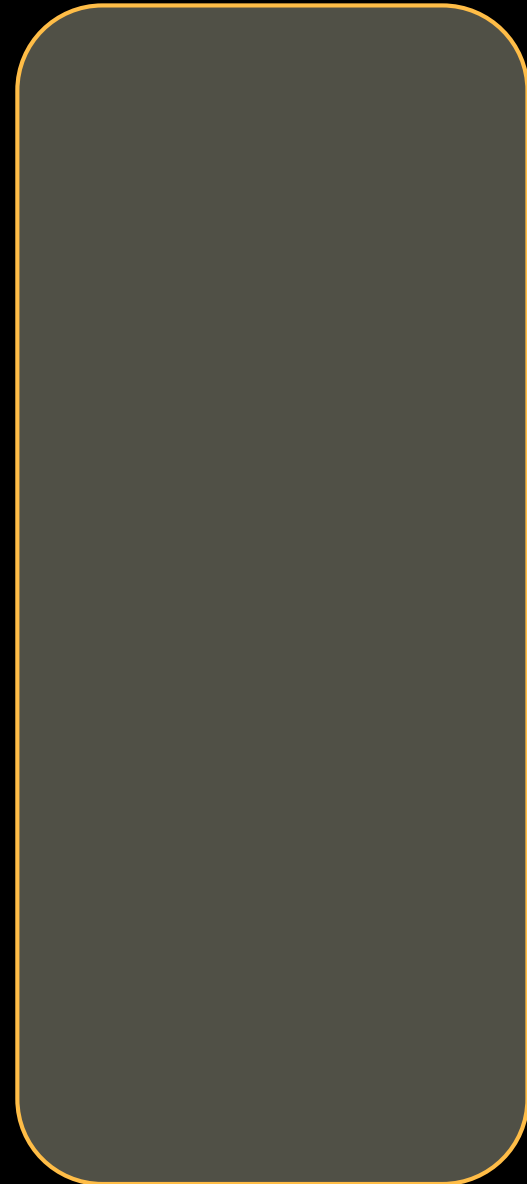
Get help up from the medical tent. Get as many people up here as you can from the medical tent.

Alright.

Delta 984. Send more to the corner of Green (unintelligible) and Huntington... (unintelligible)...We're gonna need more ambulance here....

We need more ambulances....

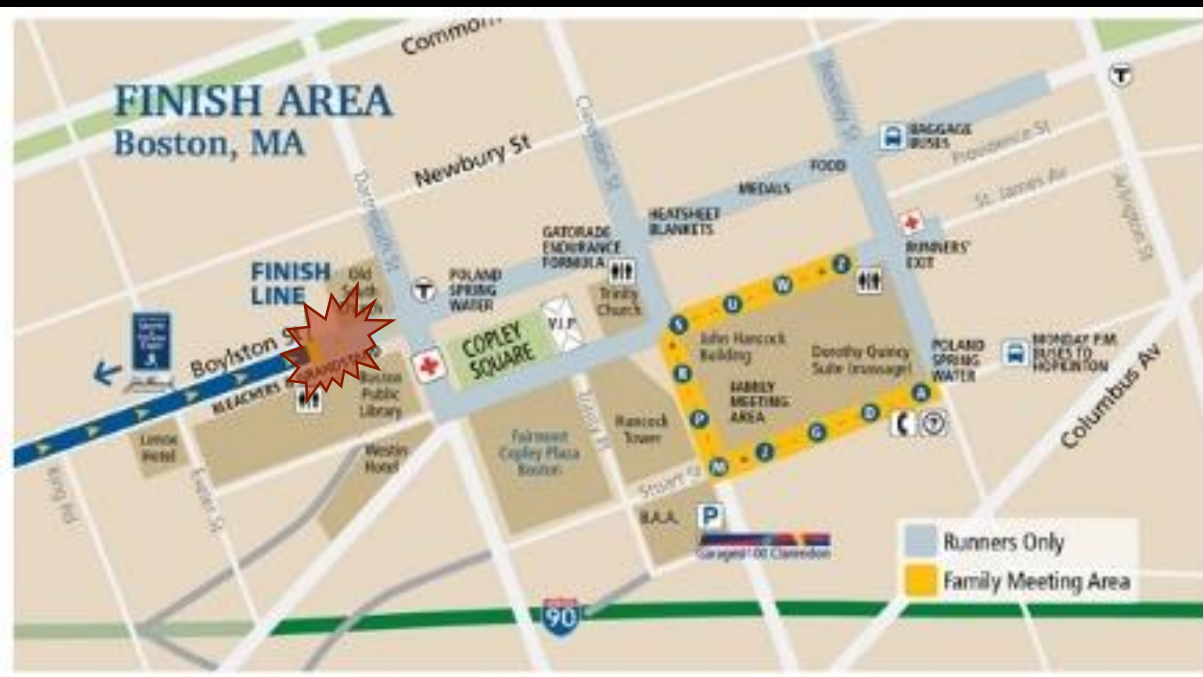
They're goin'.



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Boston Regional Intelligence Center

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BRIC.bpd@cityofboston.gov | Phone: 617-343-4328 | Fax: 617-343-5222

Officer Awareness: Urgent Advisory

Officer Safety & Awareness

Possible Armed and Dangerous Suspect

April 19th, 2013



Dzhokhar A. TSARNAEV

DOB: 7/22/1993

LKA: 410 Norfolk St. Apt #3, Cambridge, MA

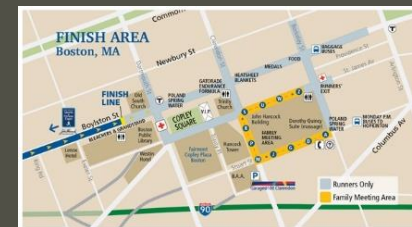
Information Update: the above suspect in hood, a suspect in the Boston Marathon Bombing, has been identified by the FBI as the individual in the photo on the right, Dzhokhar TSARNAEV (DOB: 7/22/93).

**APPROACH WITH CAUTION. SUSPECT MAY BE
ARMED AND DANGEROUS.**

Anyone with information regarding the above individual is advised to please contact 1-800-494-TIPS or the BRIC at 617-343-4328 / BRIC.bpd@cityofboston.gov

Page 1 of 1

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Boston Regional Intelligence Center
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Officer Safety & Awareness
Possible-Armed and Dangerous Suspect
April 19th, 2013



Dzhokhar A. TSARNAEV
DOB: 7-22-1993
LKA: 410 North St., Apt #3, Cambridge, MA

Information Update: the above suspect is listed as a suspect in the Boston Marathon Bombing, has been identified by the FBI as the individual in the photo on the right. *Referred to as DZHOZHAR (DOB: 7-22-1993).*

APPROACH WITH CAUTION. SUSPECT MAY BE ARMED AND DANGEROUS.

Anyone with information regarding the above individual is advised to please contact 1-800-FBI-1122 or the BREC at 617-743-4123 / BREC.bip@cityofboston.gov

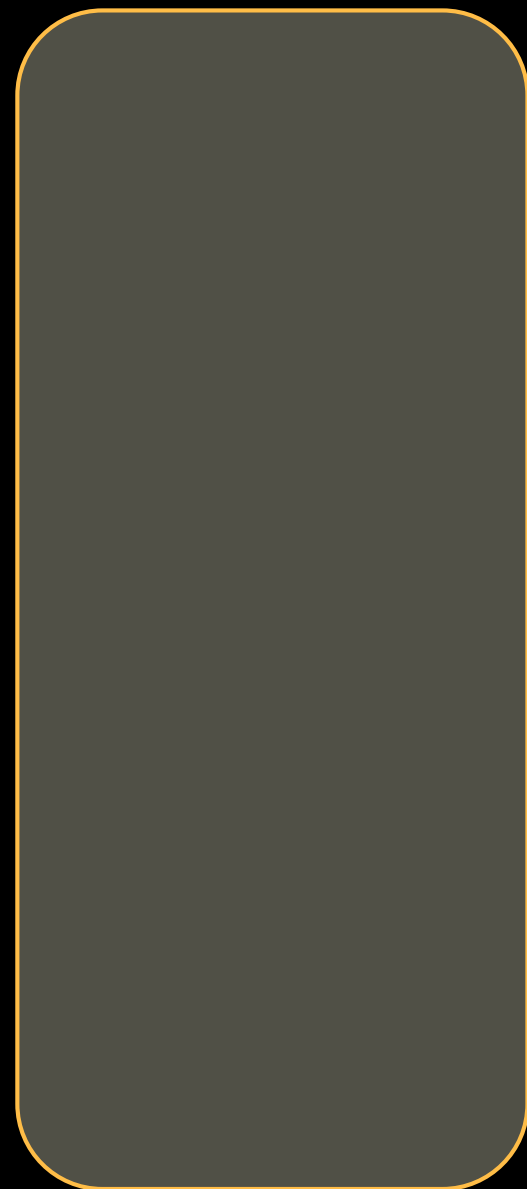
Now...

It's out West Fire, The uh West Fertilizer is uh... one of their mills is on fire...there's uh heavy smoke coming out of the top of it.

Stand by, was just about to do that.

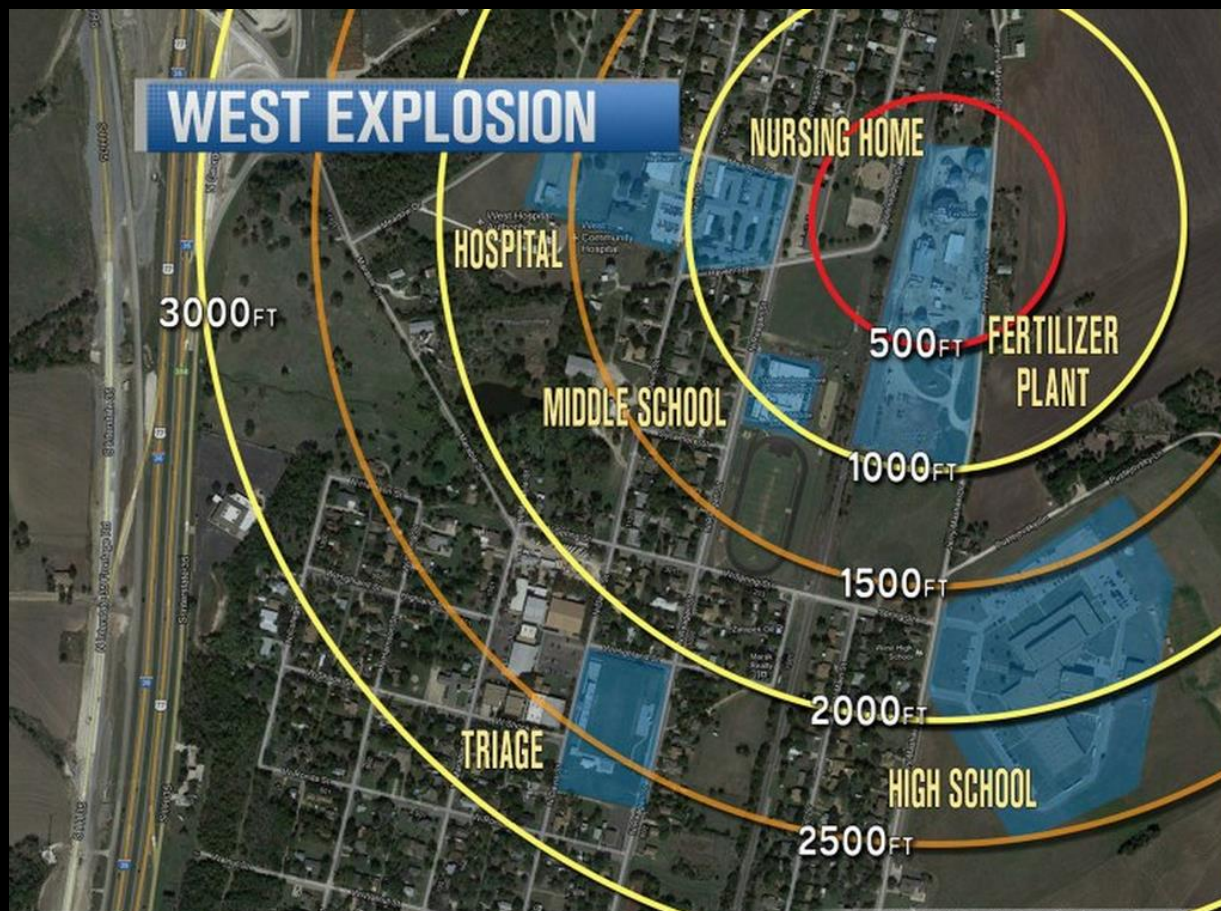
<Volunteer Fire Tone Goes Out>

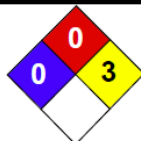
...61, fire. 61, fire. We need you to respond to the West Fertilizer Plant. They have uh...fire out there again. West fire (unintelligible)...West Fertilizer Plant.





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Health	2
Fire	1
Reactivity	1
Personal Protection	E

Material Safety Data Sheet Ammonium nitrate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ammonium nitrate

Catalog Codes: SLA3082, SLA4585

CAS#: 6484-52-2

RTECS: BR9050000

TSCA: TSCA 8(b) inventory: Ammonium nitrate

CI#: Not available.

Synonym: Ammonium Saltpeter; Nitric acid, ammonium salt

Chemical Name: Ammonium Nitrate

Chemical Formula: NH_4NO_3

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.
Houston, Texas 77396

US Sales: 1-800-901-7247

International Sales: 1-281-441-4400

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ammonium nitrate	6484-52-2	100

Toxicological Data on Ingredients: Ammonium nitrate: ORAL (LD50): Acute: 2217 mg/kg [Rat].

Section 3: Hazards Identification

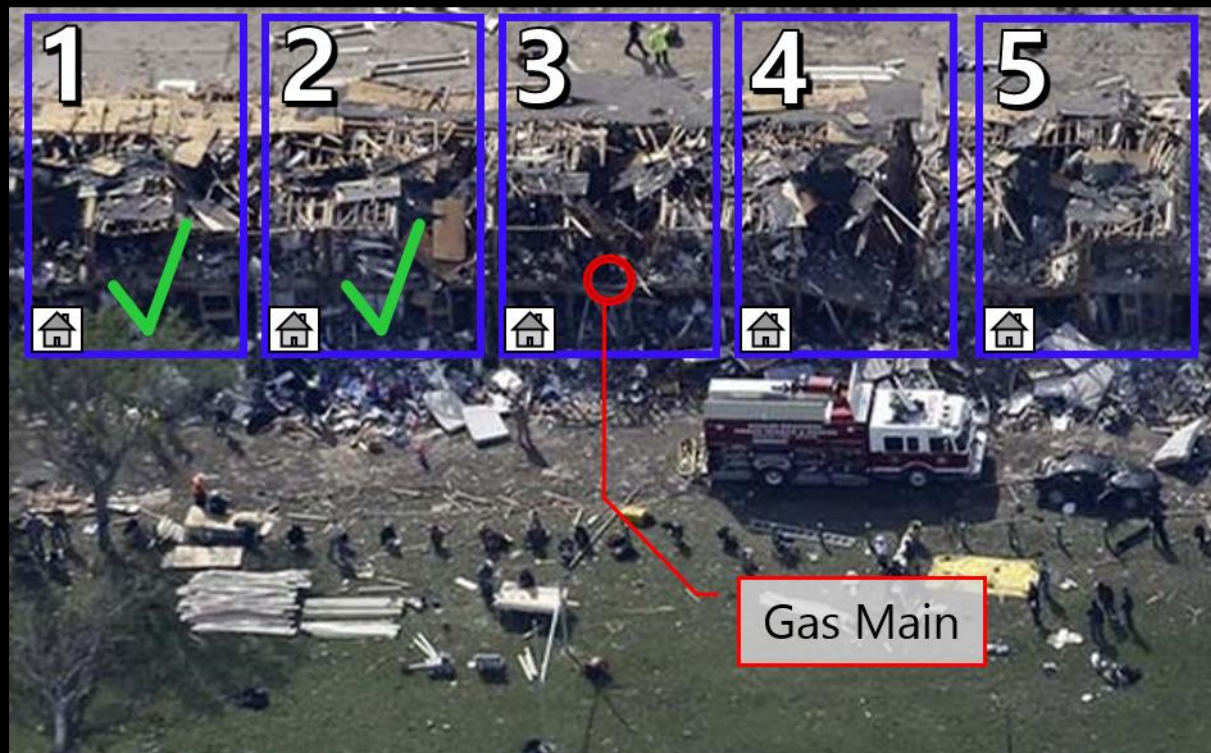
Potential Acute Health Effects:



Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. The substance may be toxic to blood, gastrointestinal tract. Repeated or prolonged exposure to the substance can produce target organs damage.









 Chemicals & Laboratory Equipment			Page 1 of 1 Version 1.0 Printable
Material Safety Data Sheet Ammonium nitrate MSDS			
Section 1: Chemical Product and Company Identification			
Product Name: Ammonium nitrate Chemical Name: Ammonium nitrate Chemical Formula: NH ₄ NO ₃ Chemical Structure: NH ₄ ⁺ NO ₃ ⁻ Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water. It is a strong oxidizer and can cause fire or explosion when mixed with combustible materials. It is also a powerful irritant and can cause severe burns.		Supplier Information: Supplier Name: Science Lab Supplier Address: 10000 N. 10th Ave., Suite 100, Scottsdale, AZ 85258 Supplier Phone: (480) 344-1111 Supplier Fax: (480) 344-1112 Supplier Email: info@sciencelab.com Supplier Website: www.sciencelab.com	
Section 2: Composition and Information on Ingredients			
Composition: Ingredient Name: Ammonium nitrate Chemical Formula: NH ₄ NO ₃ Chemical Structure: NH ₄ ⁺ NO ₃ ⁻ Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water. It is a strong oxidizer and can cause fire or explosion when mixed with combustible materials. It is also a powerful irritant and can cause severe burns.		Chemical Composition: Chemical Name: Ammonium nitrate Chemical Formula: NH ₄ NO ₃ Chemical Structure: NH ₄ ⁺ NO ₃ ⁻ Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water. It is a strong oxidizer and can cause fire or explosion when mixed with combustible materials. It is also a powerful irritant and can cause severe burns.	
Section 3: Hazards Identification			
Physical Hazards: Ammonium nitrate is a strong oxidizer and can cause fire or explosion when mixed with combustible materials. It is also a powerful irritant and can cause severe burns.			
Health Hazards: Ammonium nitrate is a strong irritant and can cause severe burns. It is also a powerful oxidizer and can cause fire or explosion when mixed with combustible materials.			
Environmental Hazards: Ammonium nitrate is a strong irritant and can cause severe burns. It is also a powerful oxidizer and can cause fire or explosion when mixed with combustible materials.			

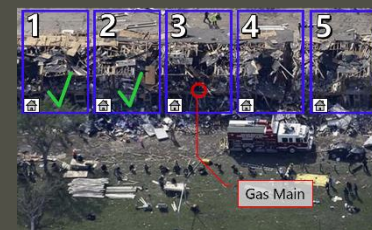
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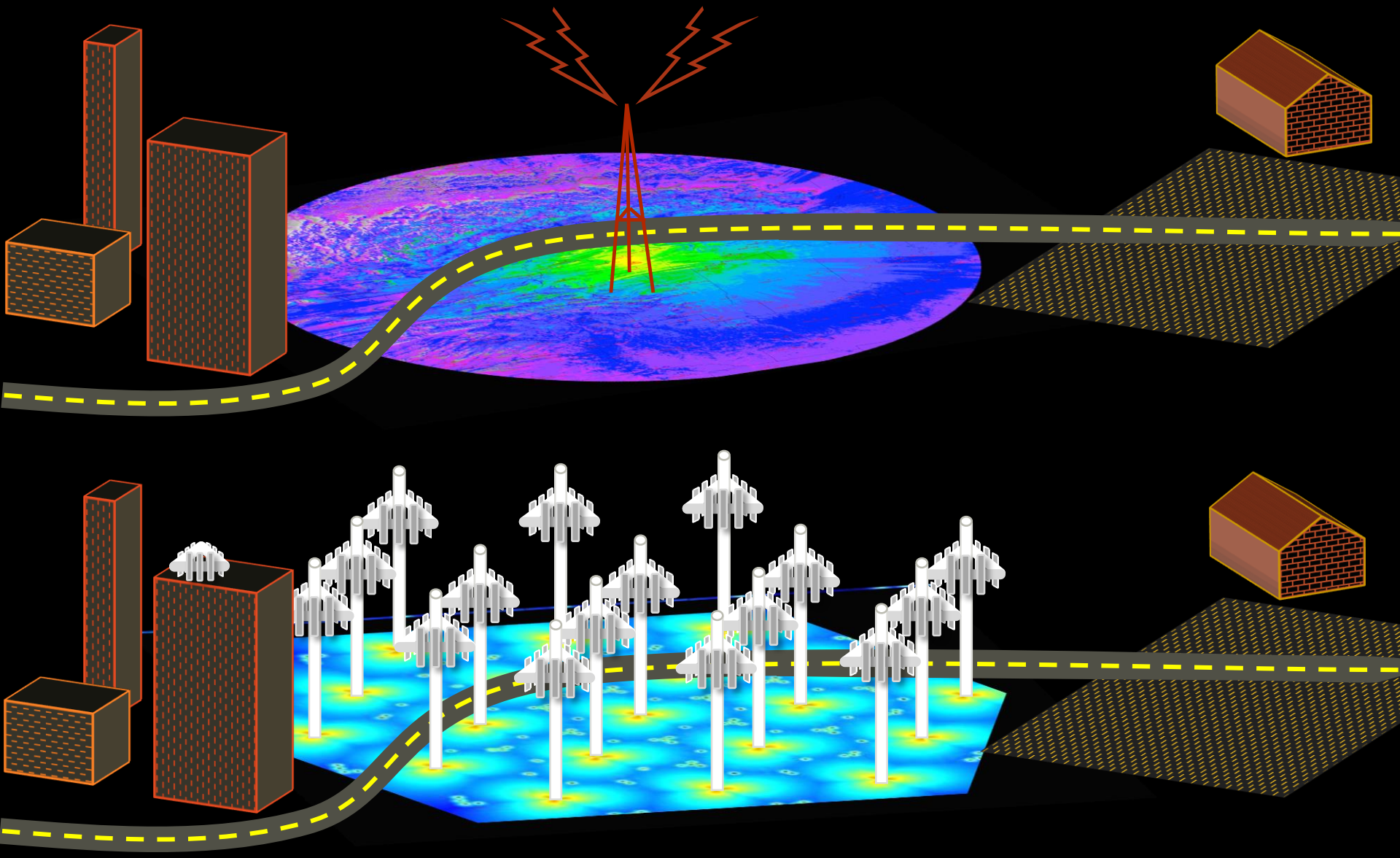
© Scott Dorsett/Waxahachie Daily Light



Science Lab.com <small>Chemicals & Laboratory Support</small>		
Material Safety Data Sheet Ammonium nitrate MSDS		
Section 1: Chemical Product and Company Identification		
Product Name: Ammonium nitrate Chemical Name: NH ₄ NO ₃ Chemical Formula: NH ₄ NO ₃ Chemical Structure:  Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water. Chemical Name: Ammonium nitrate Chemical Formula: NH ₄ NO ₃ Chemical Structure:  Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water.	Company Information: Science Lab.com, Inc. 10000 Highway 100 San Diego, CA 92121 Phone: (619) 444-1111 Fax: (619) 444-1112 Website: www.sciencelab.com Emergency Phone: (619) 444-1111	Product Identification: Product Name: Ammonium nitrate Chemical Name: NH ₄ NO ₃ Chemical Formula: NH ₄ NO ₃ Chemical Structure:  Chemical Description: Ammonium nitrate is a white crystalline solid, highly soluble in water.
Section 2: Composition and Information on Ingredients		
Composition: Ammonium nitrate	CAS # 6484-52-2	% by Weight 100
Section 3: Hazard Identification		
Hazardous Effects: Ammonium nitrate is a strong oxidizer. It may cause fire or explosion if exposed to heat or flame. It may react with combustible materials. It may cause corrosion to metals. It may cause skin irritation. It may cause eye irritation. It may cause respiratory irritation. It may cause harm to the environment.		
Physical/Chemical Hazards: Ammonium nitrate is a strong oxidizer. It may cause fire or explosion if exposed to heat or flame. It may react with combustible materials. It may cause corrosion to metals. It may cause skin irritation. It may cause eye irritation. It may cause respiratory irritation. It may cause harm to the environment.		

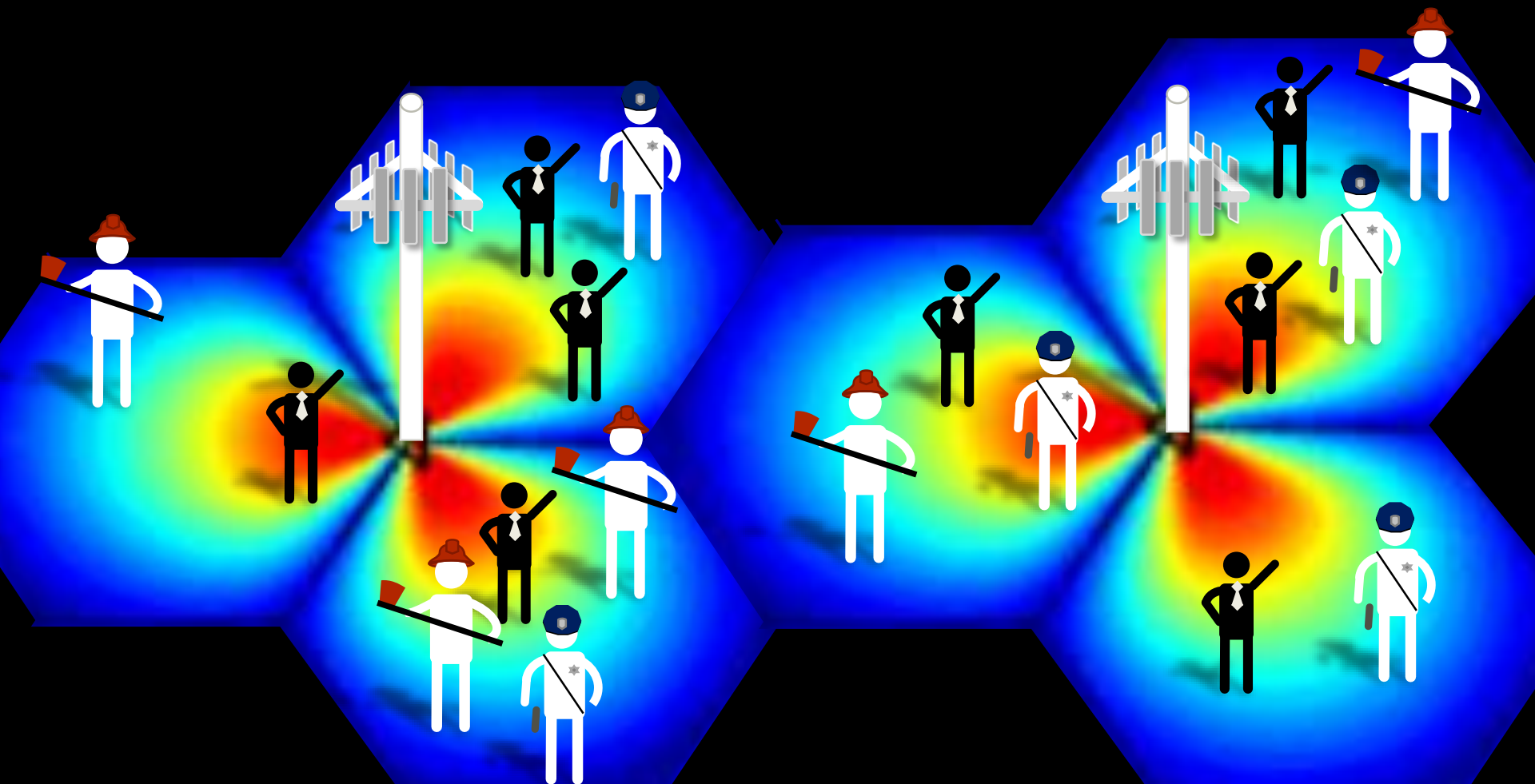


LTE \neq LMR



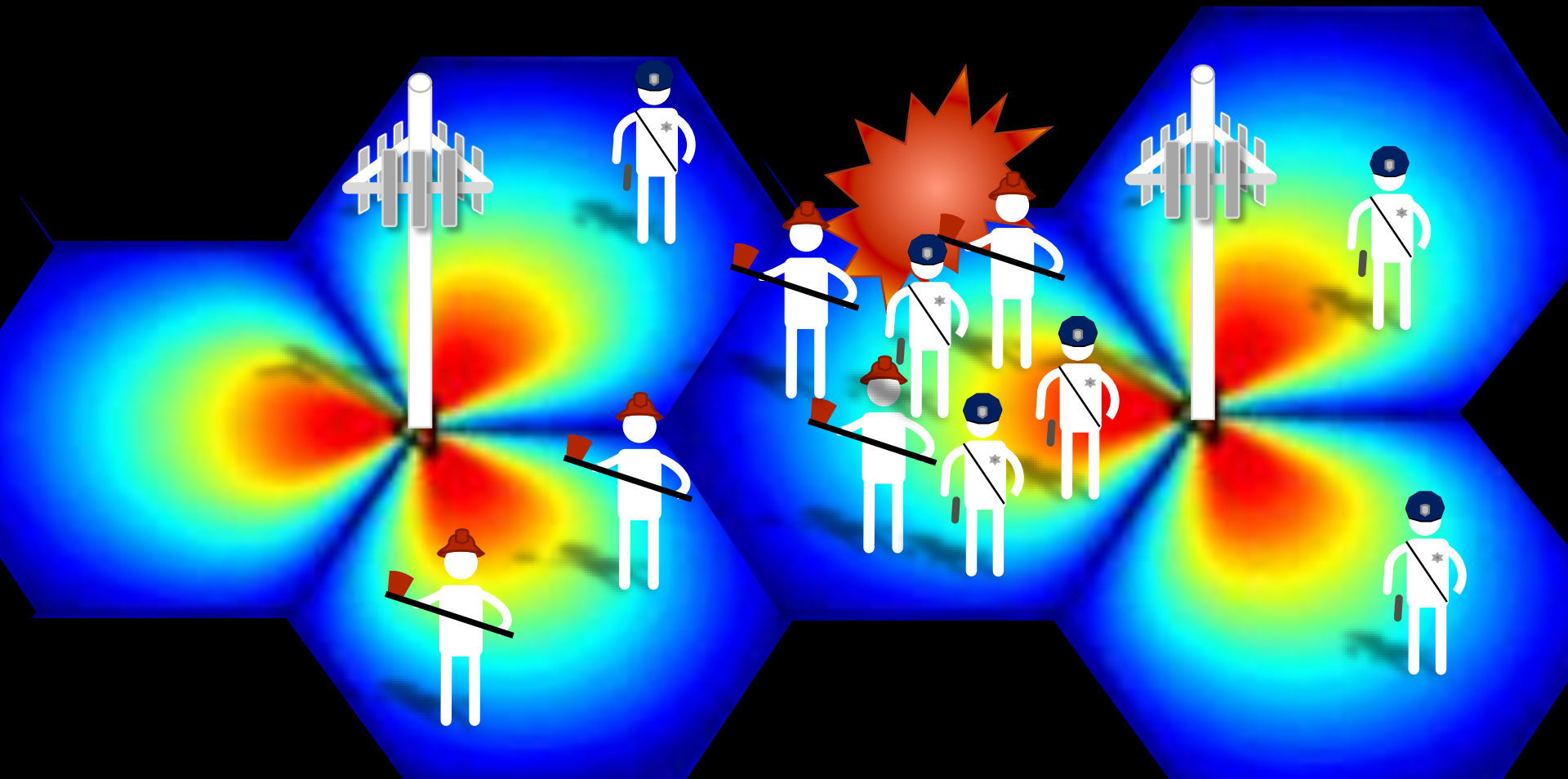
LTE Network

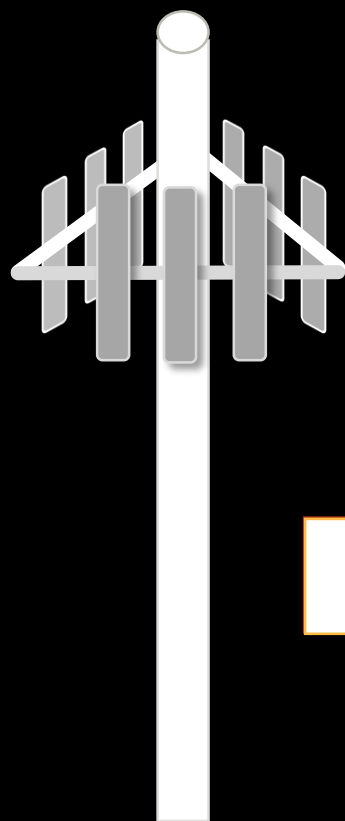
Preemption...



LTE Network

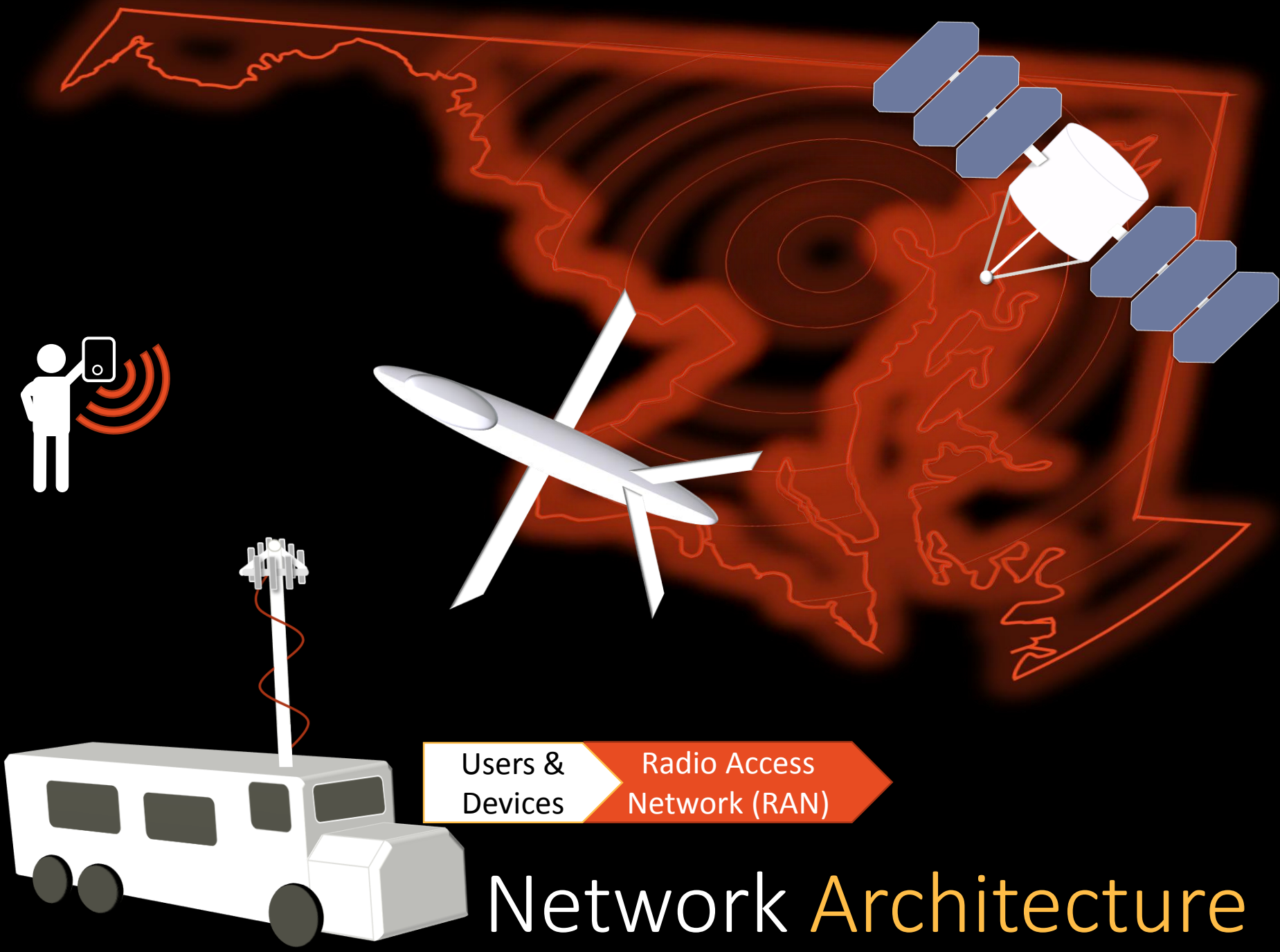
Ruthless!!
Preemption...

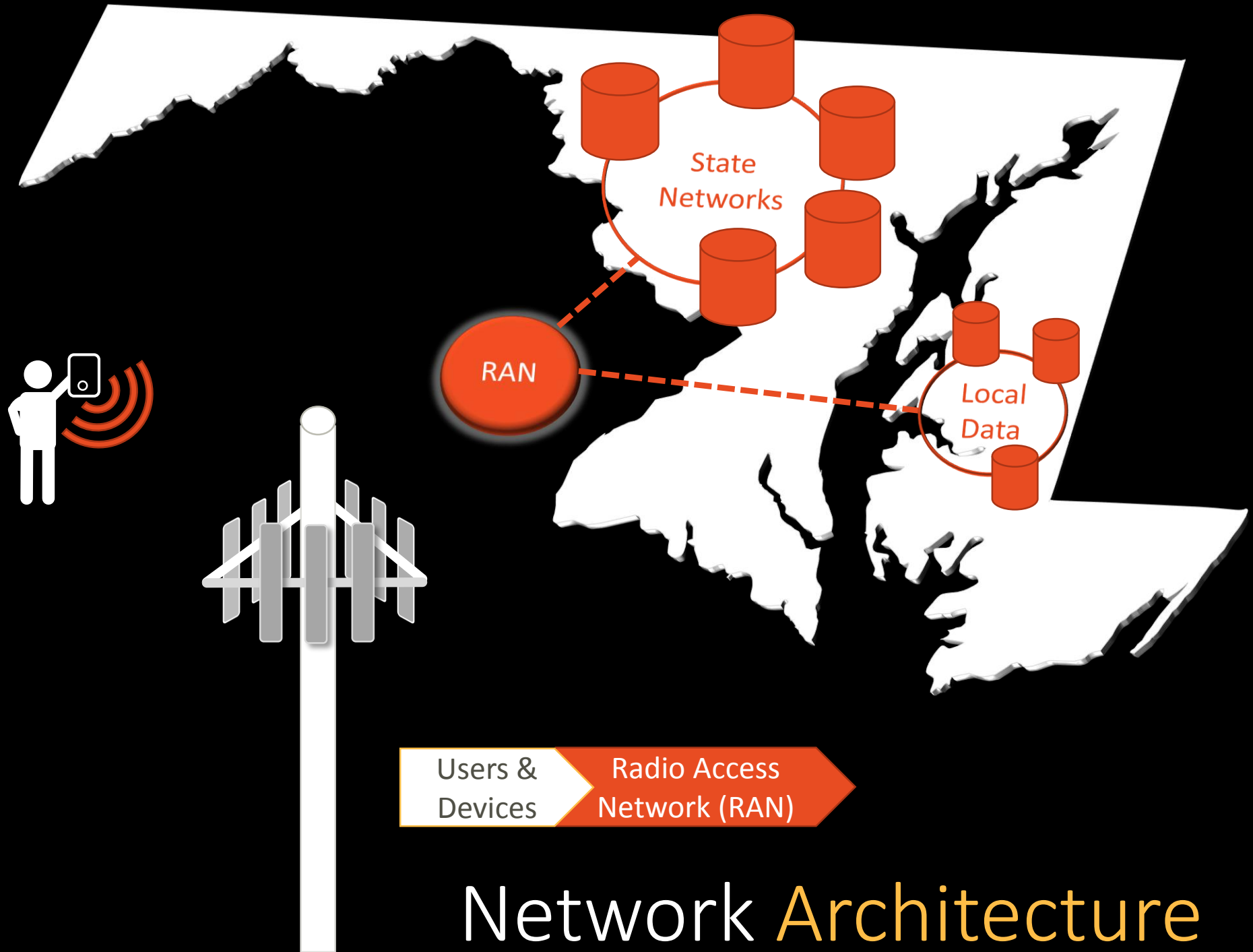


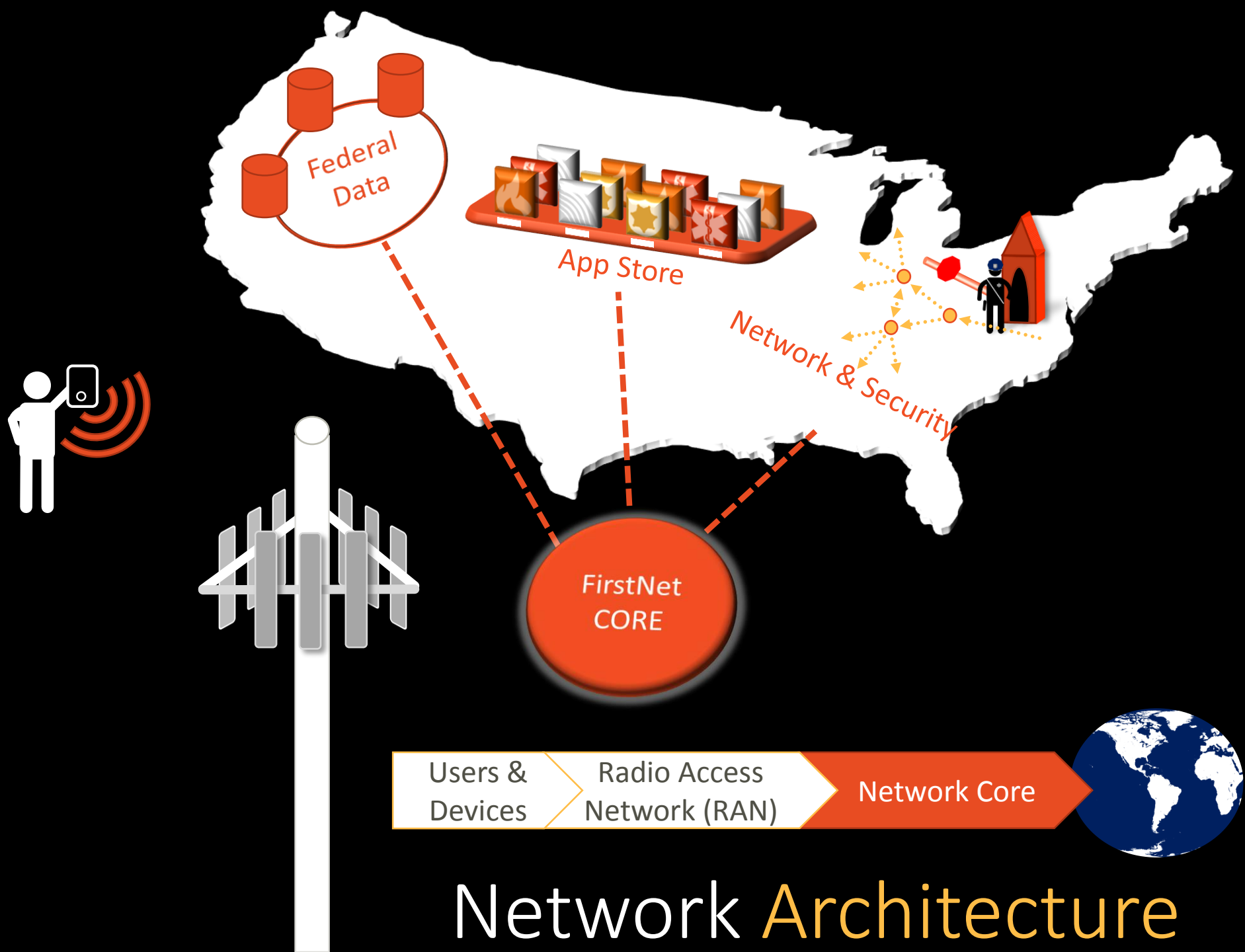


Network Architecture

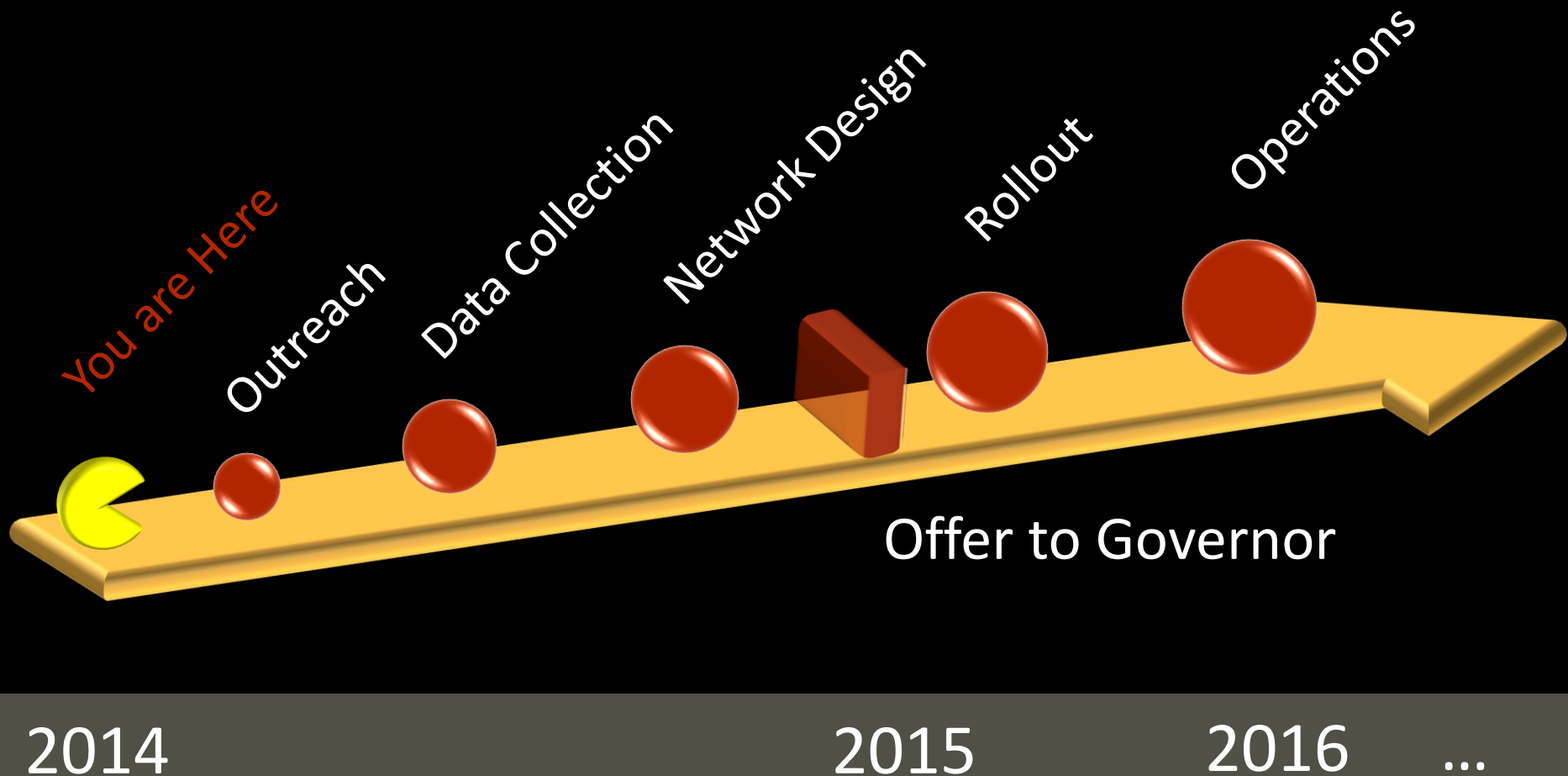




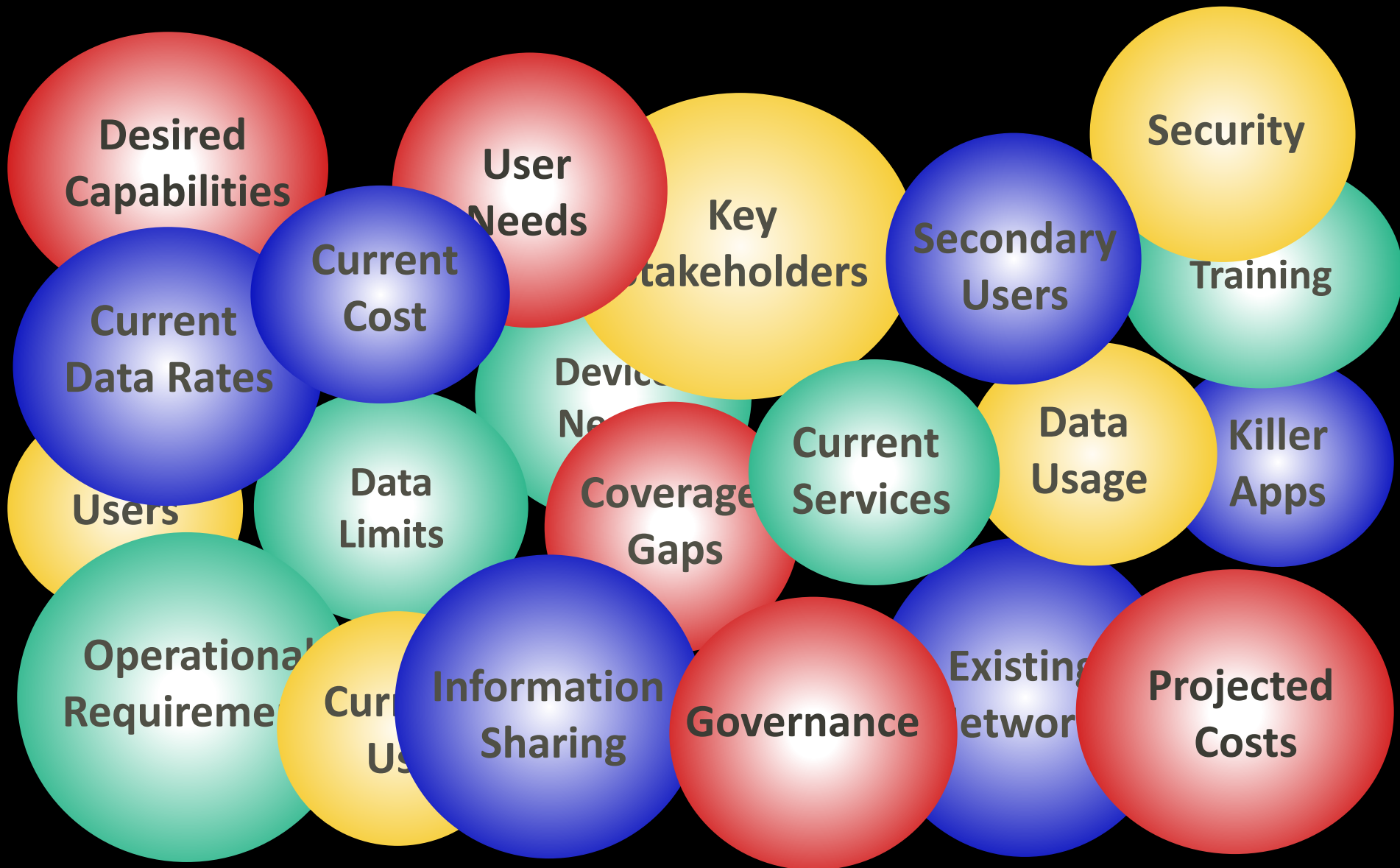




TIMELINE: NATIONAL



Outreach & Data Collection



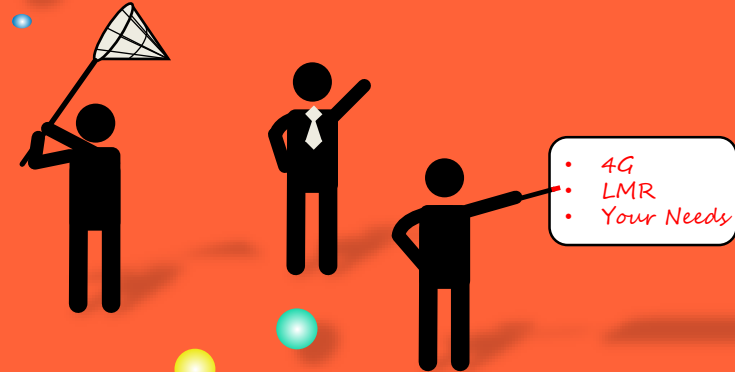
PROCESS: MARYLAND

2014



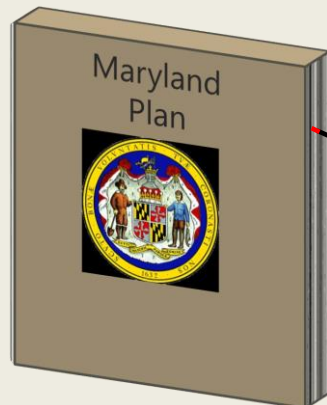
Stakeholder
Outreach

Data
Collection



- 4G
- LMR
- Your Needs

2015



Consultation
& Planning

2016

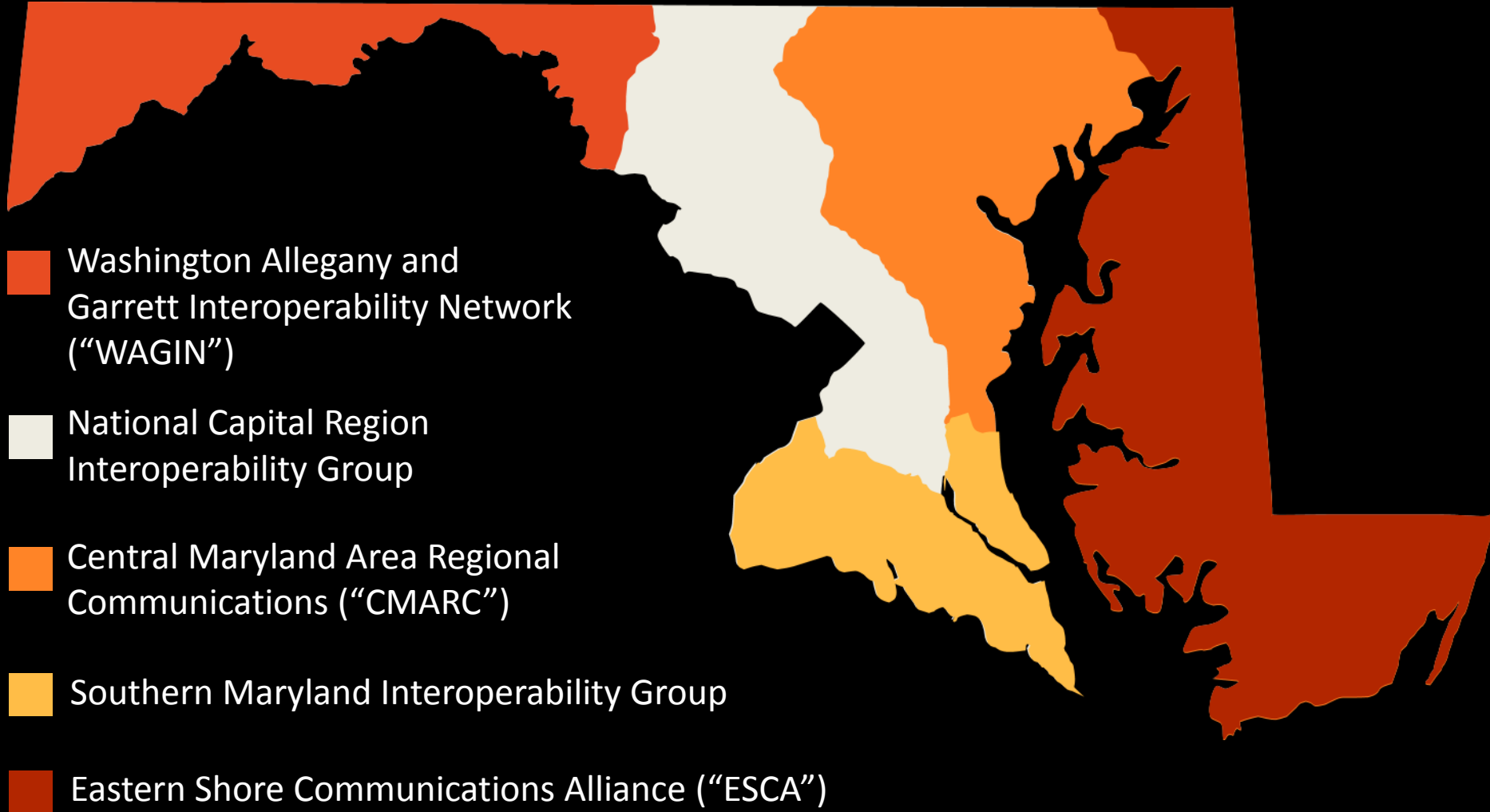
...

Governance & Stakeholders

Statewide Interoperability
Executive Committee
("SIEC")



Governance & Stakeholders



What Can I Do To Help?

- Check Out Our Google Site!

<https://sites.google.com/site/statepstforums/>

- Find Us On Twitter!

[@MDInterOp](https://twitter.com/MDInterOp)

<https://twitter.com/MDInterOp>



Get Ready for Consultation!

Disclaimer

This slide deck was prepared by the Maryland Department of Information Technology using funds under award 24-10-S13024 from the National Telecommunications and Information Administration (NT/A), U.S. Department of Commerce (DOC). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the NTIA, DOC, or FirstNet.